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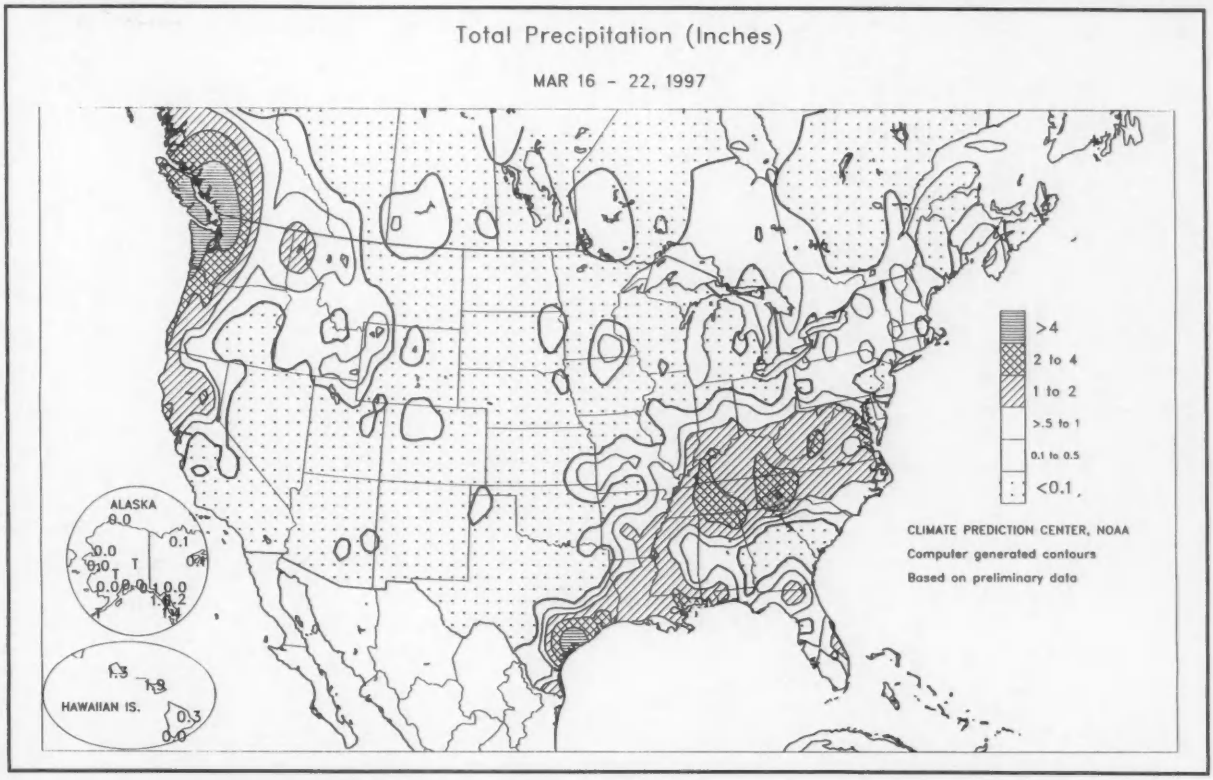
WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

March 16 - 22, 1997

Wet conditions persisted in the **Pacific Northwest** and from **southeastern Texas** to the **Ohio Valley.** In contrast, a spell of warm, very dry weather stretched to 3 weeks from the **Southwest** to the **central and southern Plains,** reducing topsoil moisture for vegetative winter wheat. Beneficial showers dampened much of **Florida.** Only light precipitation fell across deeply snow-covered areas of the **upper Midwest** and **northern Plains,** but the snowmelt season commenced, raising river levels. Near-normal temperatures prevailed in the **upper Midwest,** while readings averaged 5 to 10°F below normal in **New England.** Despite early-week frost, temperatures averaged a few degrees above normal in the **Southeast.** Farther west, departures reached +6 to +14°F on the **High Plains** and **Intermountain West,** resulting in more than 150 daily-record highs.

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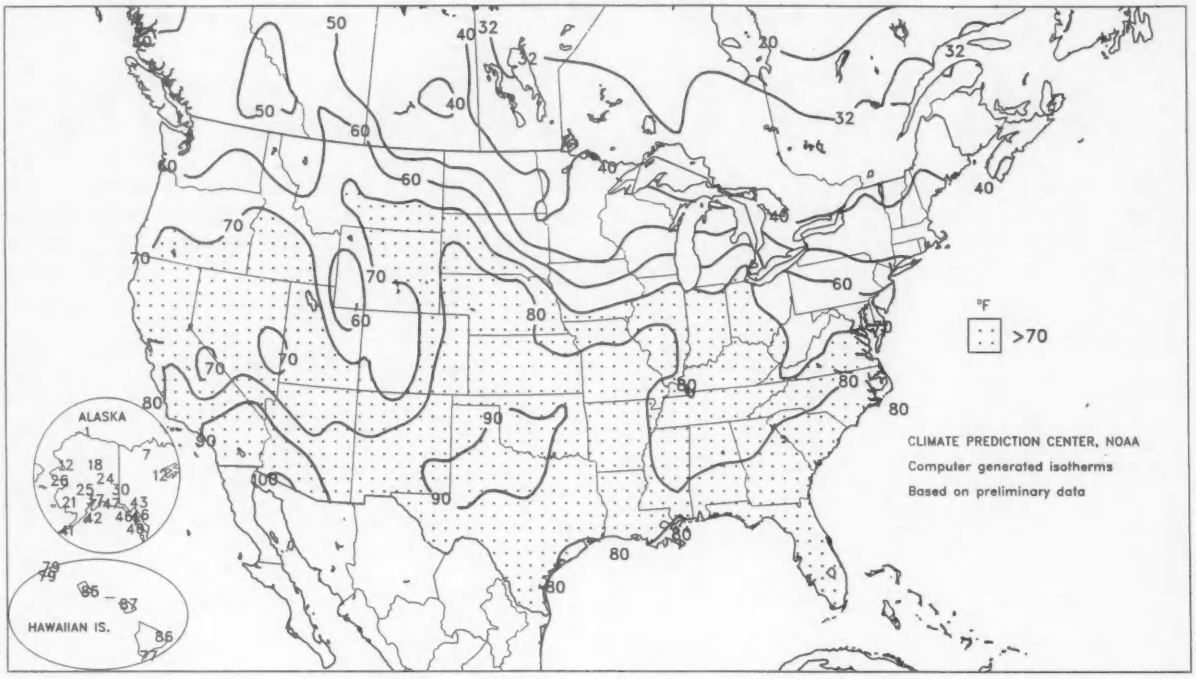
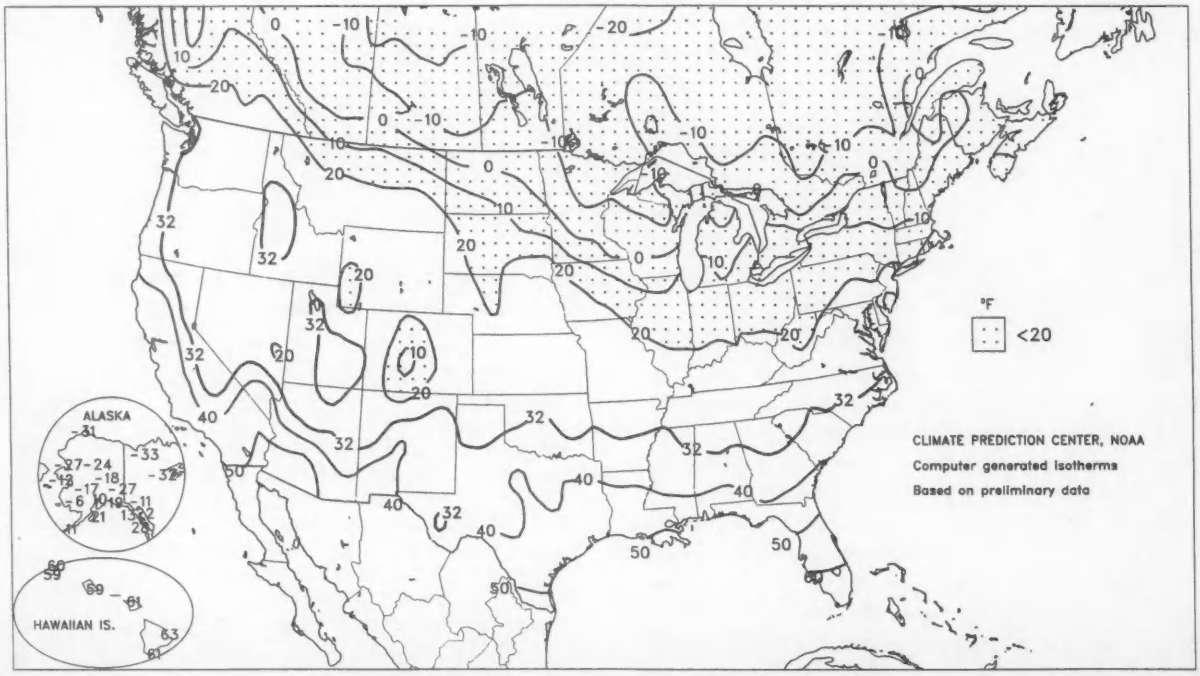
Extreme Maximum Temperature (°F)

MAR 16 - 22, 1997



Extreme Minimum Temperature (°F)

MAR 16 - 22, 1997



(Continued from front cover)

Early in the week, cold air lingered across the **North** and **East**. On Sunday, daily-record lows included 25°F in **Wenatchee, WA**, -12°F in **Green Bay, WI**, and -17°F in **International Falls, MN**. **Embarrass, MN** registered -30°F, and **Yakima, WA** recorded a 2-inch snowfall. In the **Southeast**, temperatures dipped to freezing or below as far south as a **northeastern Mississippi-to-northwestern South Carolina** line. Later on March 16, the mercury in **Spokane, WA** attained 50°F for the first time in 127 days (since November 10, 1996), their third-longest span on record. Warmth also spread onto the **High Plains**, where **Pueblo, CO** notched a high of 78°F after a low of 16°F. A day later, highs in **Kansas** reached 86°F in **Liberal** and 84°F in **Ulysses**. **Gage, OK** logged 89°F.

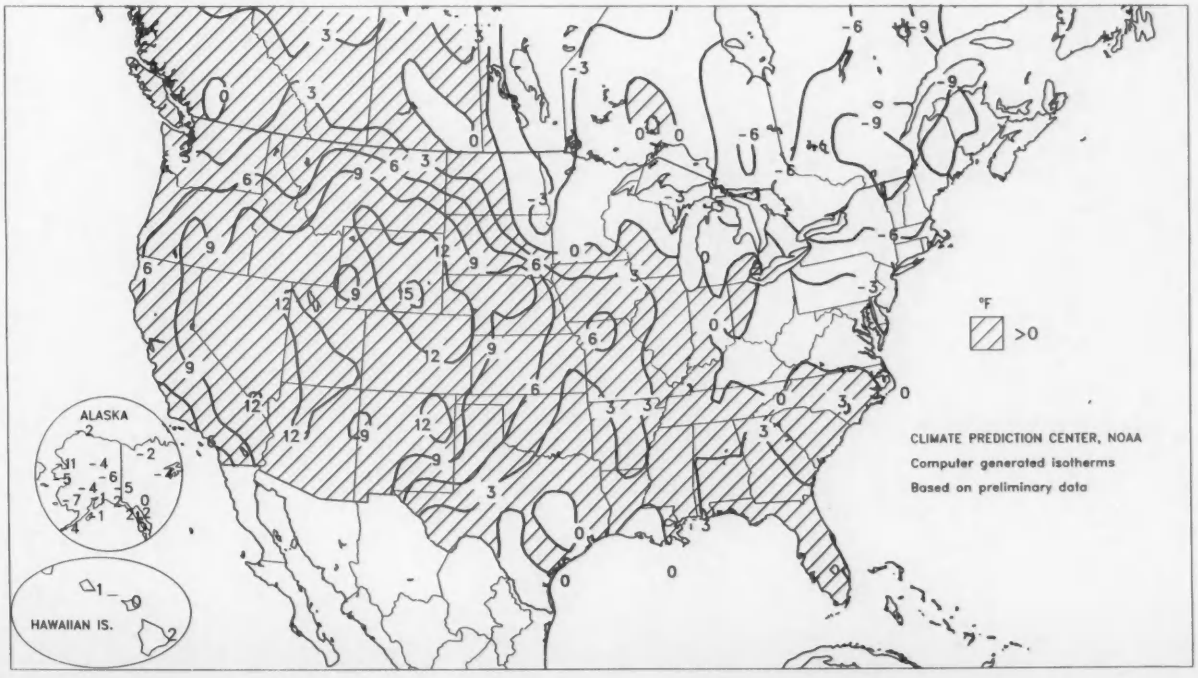
Meanwhile, heavy rain fell across **southeastern Texas**, spreading into the **Ohio Valley** on Tuesday. On March 16-17, 24-hour rainfall reached 4.49 inches in **Victoria, TX**, boosting their monthly total to a March-record 10.89 inches. In **Louisville, KY**, 2.69 inches fell on Tuesday, lifting their March-record precipitation to 16.09 inches. Similarly, March-record rainfall reached 11.90 inches in **Lexington, KY**. Heavy rain also pelted the **Pacific Northwest**, especially west of the **Cascades** on March 18-19. **Portland, OR** posted consecutive daily-record rainfalls (0.69 and 0.63 inches), boosting their monthly total to 6.60 inches (241 percent of normal). By week's end, monthly rainfall in **Astoria, OR** reached a March-record 13.78 inches. Significant flooding, mudslides, and avalanches occurred in **western Washington**. On the southern slopes of the **Olympic Mountains**, record crests were measured in parts of the **Wynoochee, Satsop, and Skokomish River** basins. Storm-total (March 16-19) rainfall reached 22.36 inches (10.96 inches in 24 hours) at **Wynoochee Dam**.

Tuesday marked the first of five consecutive daily-record highs in **Alta, UT** (55, 58, 56, 50, and 53°F). At **Organ Pipe Cactus National Monument, AZ**, a high of 98°F on Thursday fell 1° shy of their March record, set in 1988. A day earlier, the maximum of 97°F at the **Los Angeles Civic Center** was their warmest on record during astronomical winter, eclipsing their 1916 record by 1°. In **Idaho, Boise** logged 80°F on March 19, their earliest such occurrence. On the **Plains**, warmth peaked on March 20-21. On Thursday, highs topped 80°F as far north as **Rapid City, SD** (81°F). Farther south, maxima included 83°F in **North Platte, NE** and **Goodland, KS**. A day later, highs in **Texas** soared to 94°F in **Wichita Falls** and 93°F in **Lubbock**. Nearly 50 percent of the daily-record highs set across the **Western and Central States** during the week had been established in 1960, 1988, 1990, or 1994-96.

Farther north, light snow returned to the **Great Lakes and Northeastern States** at week's end. Weekly snowfall totaled 3.1 inches in **Marquette, MI**, lifting their seasonal to 253.4 inches, above the record set in 1995-96. Elsewhere, weekly snowfall included 3.7 inches in **Aberdeen, SD**, 3.6 inches in **Bismarck, ND**, 3.4 inches in **Glasgow, MT**, and 2.9 inches in **Burlington, VT**. Meanwhile, cold (temperatures up to 10°F below normal), dry weather prevailed in **Alaska**, and heavy rain peppered **Hawaii**, except the **Big Island**.

Departure of Average Temperature from Normal (°F)

MAR 16 - 22, 1997



Dry and Wet Contrasts, March 1-23

A persistent weather pattern during the first 3 weeks of March resulted in precipitation extremes nearly nationwide. Parallel bands of nearly dry weather and extreme wetness stretched from the Southwest to the central Plains, and from southern Texas to the Ohio Valley, respectively. A broader area of drier-than-normal conditions extended from California into parts of the Midwest. In the Pacific Northwest, recent heavy precipitation aggravated long-term wetness, causing flooding and mudslides. The season's first Palmer Drought Severity Map will be issued in next week's *Bulletin*.

The likelihood of spring snowmelt flooding has made the northern Plains and upper Midwest one of the Nation's most-watched areas. Although no major storms have crossed the region recently, some snow fell during the first 5 days of the month and again on March 12-14. Through March 22, month-to-date snowfall totaled 23.2 inches in Fargo, ND and 7.7 inches in Aberdeen, SD.

The table below highlights some of the observed precipitation extremes for March 1-23:

Wet

State	Location	Total (Inches)	Percent of Normal
AR	Little Rock	7.60	211%
ID	Lewiston	1.55	201
IN	Evansville	6.19	176
KY	Louisville	16.09*	465
	Lexington	11.90*	363
	Jackson	7.66	213
	Paducah	6.76	186
LA	Shreveport	7.35	271
MT	Missoula	1.70	233
	Kalispell	1.53	196
OR	Astoria	13.78*	253
	Portland	6.60	241
	Salem	6.78	209
TN	Memphis	10.20	254
	Nashville	8.62	237
TX	Brownsville	4.58	1,272
	Victoria	10.89*	947
	Del Rio	2.43	565
	Houston	6.71	305
	San Angelo	1.59	237
WA	Seattle	7.86	288
	Hanford	0.70	200
	Spokane	2.29	199
WV	Huntington	7.24	276
	Charleston	6.92	243

Dry

State	Location	Total (Inches)	Percent of Normal
AZ	Flagstaff	0	0%
	Phoenix	0	0
	Tucson	0	0
CO	Pueblo	0.11	20
	Co. Springs	0.12	18
	Grand Jct.	0.06	9
	Denver	0.07	8
	Alamosa	0	0
KS	Topeka	0.13	7
	Wichita	0.12	7
	Concordia	0.11	7
	Goodland	trace	0
	Dodge City	0	0
MO	Kansas City	0.29	16
NE	Scottsbluff	0.16	21
	North Platte	0.03	4
NV	Elko	0.13	18
NM	Albuquerque	0	0
OK	Tulsa	0.38	15
	Oklahoma City	trace	0
SD	Rapid City	0.09	13
TX	Wichita Falls	0.11	7
	Lubbock	0.03	4
	Midland	0.01	2
	Amarillo	0	0

*** Denotes March-record precipitation.**

National Weather Data for Selected Cities

Weather Data for the Week Ending March 22, 1997

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP, °F		PRECIP.	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	70	44	78	30	57	2	0.19	-1.24	0.19	2.58	58	13.70	96	-	-	0	1	1	0
	MOBILE	74	54	85	42	64	3	1.82	0.38	1.55	5.36	116	15.92	107	92	46	0	0	3	1
	MONTGOMERY	73	49	82	39	61	4	0.54	-0.88	0.52	1.43	32	14.39	97	86	44	0	0	2	1
AK	ANCHORAGE	32	19	37	10	26	-1	0.00	-0.17	0.00	0.09	15	0.71	34	67	49	0	7	0	0
	BARROW	-9	-23	-1	-31	-16	-2	0.00	-0.03	0.00	0.03	33	0.11	34	77	73	0	7	0	0
	FAIRBANKS	19	-5	24	-18	7	-6	0.03	-0.05	0.03	0.05	19	0.65	56	71	45	0	7	1	0
	JUNEAU	39	30	46	22	35	2	–	–	–	–	–	–	–	–	–	0	4	-	-
	KODIAK	37	27	42	21	32	-1	0.02	-1.02	0.01	0.68	17	17.50	109	73	60	0	7	2	0
	NOME	14	-5	28	-12	4	-5	0.00	-0.11	0.00	0.15	43	2.04	117	76	56	0	7	0	0
AZ	PHOENIX	89	62	93	55	75	13	0.00	-0.20	0.00	0.00	0	1.46	72	37	12	4	0	0	0
	PRESCOTT	74	38	85	33	56	13	0.00	-0.41	0.00	0.00	0	3.06	69	–	–	0	0	0	0
	TUCSON	86	54	91	47	70	11	0.00	-0.17	0.00	0.00	0	1.61	78	33	9	2	0	0	0
	YUMA	92	60	97	56	76	10	0.00	-0.06	0.00	0.00	0	0.47	64	–	–	5	0	0	0
AR	FORT SMITH	68	42	67	34	55	3	0.13	-0.79	0.12	3.35	122	10.41	143	87	47	0	0	2	0
	LITTLE ROCK	68	46	84	32	57	3	0.72	-0.42	–	7.60	221	14.87	146	–	–	0	1	-	-
CA	BAKERSFIELD	79	50	83	44	64	7	0.21	-0.02	0.21	0.21	28	2.99	111	76	11	0	0	1	0
	EUREKA	63	48	73	41	55	6	0.50	-0.71	0.28	2.43	62	13.81	94	84	39	0	0	3	0
	FRESNO	78	50	84	45	64	9	0.01	-0.42	0.01	0.01	1	3.40	68	88	11	0	0	1	0
	LOS ANGELES	71	54	87	51	63	5	0.30	-0.13	0.11	0.45	30	4.67	73	80	34	0	0	5	0
	REDDING	69	49	76	41	59	7	1.48	0.49	1.36	2.30	71	12.02	87	–	–	0	0	3	1
	SACRAMENTO	72	51	77	46	61	8	0.52	-0.06	0.25	0.58	39	8.52	98	–	–	0	0	-	-
	SAN DIEGO	73	56	86	54	65	5	0.00	-0.41	0.00	0.00	0	3.27	70	80	36	0	0	0	0
	SAN FRANCISCO	68	52	74	49	60	7	0.09	-0.60	0.09	0.20	9	8.00	82	92	35	0	0	1	0
CO	DENVER	68	32	79	22	50	10	0.00	-0.31	0.00	0.10	12	0.76	40	–	–	0	4	0	0
	GRAND JUNCTION	69	38	74	31	54	9	0.00	-0.22	0.00	0.06	9	0.77	46	59	20	0	2	0	0
	PUEBLO	75	28	83	16	52	9	0.00	-0.19	0.00	0.23	43	0.82	71	61	10	0	5	0	0
CT	BRIDGEPORT	42	29	50	22	36	-4	0.31	-0.55	0.20	2.51	98	7.62	86	–	–	0	5	2	0
	HARTFORD	42	24	50	16	33	-6	0.19	-0.64	0.15	1.84	72	8.42	70	75	39	0	7	2	0
DC	WASHINGTON	56	37	67	31	46	-2	0.87	0.15	0.49	3.26	146	8.28	108	79	53	0	2	2	0
FL	PANAMA CITY	74	59	77	48	66	6	–	–	–	–	–	–	–	–	–	0	0	-	-
	DAYTONA BEACH	76	60	83	54	68	3	0.55	-0.10	0.53	1.86	78	4.14	52	–	–	0	0	2	1
	JACKSONVILLE	75	56	84	43	65	2	0.50	-0.30	0.47	1.09	40	5.23	54	96	59	0	0	2	0
	KEY WEST	81	72	83	70	76	2	0.66	0.27	0.65	1.88	153	6.21	123	83	61	0	0	2	1
	MIAMI	81	68	83	64	74	2	0.26	-0.29	0.24	1.74	109	4.97	86	81	53	0	0	3	0
	ORLANDO	81	61	84	57	71	3	0.55	-0.17	0.48	2.95	123	8.46	84	93	47	0	0	2	0
	TALLAHASSEE	77	56	87	39	66	5	0.79	-0.62	0.67	1.39	30	10.81	72	88	53	0	0	5	1
	TAMPA	81	63	83	58	72	5	0.67	0.00	0.39	1.19	52	2.80	38	89	51	0	0	2	0
	WEST PALM BEACH	80	65	84	61	73	1	0.97	0.31	0.84	3.08	145	11.79	157	87	54	0	0	3	1
GA	ATLANTA	69	47	76	32	58	4	0.07	-1.25	0.07	1.47	36	14.11	103	78	42	0	1	1	0
	AUGUSTA	70	45	86	33	58	1	0.23	-0.83	0.21	1.55	48	10.06	86	92	51	0	0	3	0
	MACON	74	47	84	33	60	3	0.06	-1.02	0.04	0.57	16	11.06	86	92	43	0	0	3	0
	SAVANNAH	72	49	86	37	60	0	0.09	-0.78	0.04	0.87	32	6.29	66	96	58	0	0	2	0
HI	HILO	81	66	86	63	74	2	0.26	-2.96	0.12	9.76	102	19.92	67	89	68	0	0	6	0
	HONOLULU	81	65	85	59	73	-1	1.29	0.79	1.28	2.42	153	10.29	140	84	60	0	0	2	1
	KAHULUI	82	66	87	61	73	0	–	–	–	–	–	–	–	85	58	0	0	-	-
	LIHUE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	-	-	-	-
ID	BOISE	65	41	80	33	53	10	0.18	-0.12	0.12	0.34	37	3.21	94	71	28	0	0	2	0
	LEWISTON	59	42	63	34	50	5	0.17	-0.08	0.08	1.54	203	5.18	176	–	–	0	0	3	0
	POCATELLO	61	32	70	28	46	9	0.18	-0.14	0.11	0.42	47	2.39	84	84	29	0	3	2	0
IL	CHICAGO	49	29	71	11	39	1	0.01	-0.63	0.01	0.43	24	6.22	133	84	48	0	4	1	0
	MOLINE	54	32	73	13	43	4	–	–	–	–	–	–	–	–	–	0	2	-	-
	PEORIA	55	32	76	15	43	3	0.05	-0.65	0.05	0.44	23	6.70	138	82	48	0	3	1	0
	QUINCY	57	35	77	20	46	4	–	–	–	–	–	–	–	–	–	0	2	-	-
	ROCKFORD	49	27	68	10	38	2	0.00	-0.59	0.00	0.57	36	4.53	112	–	–	0	5	0	0
	SPRINGFIELD	57	33	82	17	45	3	0.19	-0.58	0.18	1.89	86	5.98	109	–	–	0	2	2	0
IN	EVANSVILLE	57	36	75	20	46	-1	1.71	0.61	1.67	6.17	186	13.16	144	91	50	0	1	2	1
	FORT WAYNE	50	29	72	17	40	1	0.03	-0.65	0.03	2.25	114	8.00	139	83	52	0	3	1	0
	INDIANAPOLIS	53	32	77	18	42	0	0.46	-0.43	0.46	3.38	128	10.76	145	83	50	0	3	1	0
	SOUTH BEND	49	29	71	12	39	1	0.06	-0.67	0.06	0.88	42	5.69	92	–	–	0	4	1	0
IA	DES MOINES	57	32	69	19	44	6	0.00	-0.52	0.00	0.84	46	1.58	46	81	43	0	3	0	0
	SIOUX CITY	58	30	69	25	43	6	0.16	-0.31	0.16	0.42	32	1.38	53	92	53	0	5	1	0
	WATERLOO	49	29	58	14	39	3	0.08	-0.49	0.04	1.09	72	2.84	84	–	–	0	4	2	0
KS	CONCORDIA	64	34	79	25	49	7	0.00	-0.53	0.00	0.11	7	1.65	59	81	33	0	4	0	0
	DODGE CITY	72	33	84	21	53	8	0.00	-0.37	0.00	0.00	0	1.22	57	73	23	0	4	0	0
	GOODLAND	71	31	83	24	51	11	0.00	-0.28	0.00	0.00	0	0.63	40	64	23	0	5	0	0
	TOPEKA	61	35	79	24	48	3	0.00	-0.59	0.00	0.13	8	3.00	82	97	39	0	2	0	0
	WICHITA	66	37	82	26	51	4	0.02	-0.60	0.02	0.13	7	2.65	70	83	41	0	1	1	0
KY	BOWLING GREEN	58	37	74	20	48	-1	–	–	–	–	–	–	–	–	–	0	2	-	-
	LEXINGTON	55	34	71	19	45	-2	1.59	0.57	1.58	11.49	369	19.50	212	84	51	0	2	2	1
	LOUISVILLE	59	38	77	23	48	1	1.71	0.84	1.70	11.09	339	19.74	209	89	54	0	1	2	1
LA	BATON ROUGE	70	50	81	45	60	-2	0.89	-0.18	0.52	2.18	64	15.83	114	–	–	0	0	4	1
	LAKE CHARLES	71	52	81	46	62	0	0.87	0.13	0.65	1.92	81	15.19	145	95	65	0	0	2	1
	NEW ORLEANS	71	55	80	51	63	0	0.93	-0.15	0.47	2.06	58	14.61	100	90	49	0	0	3	0
	SHREVEPORT	71	49	82	41	60	2	0.65	-0.26	0.61	7.33	253	19.90	176	89	52	0	0	3	1

Based on 1961-90 normals

Weather Data for the Week Ending March 22, 1997

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP.	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME	CARIBOU	28	6	34	0	18	-10	0.01	-0.55	0.01	1.85	109	7.68	127	82	44	0	7	1	0
	PORTLAND	35	17	42	9	26	-8	0.46	-0.38	0.35	2.45	96	7.48	79	76	42	0	7	3	0
MD	BALTIMORE	54	32	65	22	43	-2	–	–	–	–	–	–	–	–	–	0	3	-	-
	SALISBURY	54	32	70	21	43	-3	–	–	–	–	–	–	–	–	–	0	3	-	-
MA	BOSTON	41	27	48	22	34	-6	0.18	-0.65	0.17	2.31	89	5.81	59	70	37	0	6	2	0
	WORCESTER	36	21	41	13	29	-6	0.26	-0.65	0.15	2.08	75	7.14	72	–	–	0	7	3	0
MI	ALPENA	34	14	43	-1	24	-5	0.07	-0.43	0.04	1.93	134	8.07	186	86	50	0	7	2	0
	DETROIT	47	28	72	15	38	1	0.00	-0.69	0.00	2.19	126	7.82	150	77	42	0	6	0	0
	FLINT	44	24	64	12	34	-1	0.00	-0.61	0.00	0.62	43	5.58	136	80	50	0	6	0	0
	GRAND RAPIDS	44	26	57	12	35	0	0.00	-0.63	0.00	0.57	33	7.31	146	77	48	0	5	0	0
	HOUGHTON LAKE	36	16	46	-3	26	-3	0.01	-0.47	0.01	0.77	56	5.04	124	85	49	0	7	1	0
	LANSING	44	25	62	10	35	1	0.02	-0.61	0.02	1.04	71	6.11	148	–	–	0	5	1	0
	MARQUETTE	32	11	39	-16	21	-3	0.16	-0.49	0.12	2.96	153	10.56	181	89	43	0	7	4	0
	MUSKEGON	42	26	52	16	34	0	0.00	-0.59	0.00	0.61	36	5.66	107	–	–	0	5	0	0
	SAULT ST. MARIE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	-	-	-	-
MN	ALEXANDRIA	36	18	40	-4	27	-2	–	–	–	–	–	–	–	–	–	0	7	-	-
	DULUTH	35	18	41	-6	26	0	0.04	-0.42	0.02	0.35	27	1.85	56	82	53	0	7	2	0
	INT'L FALLS	34	7	41	-17	21	-3	–	–	–	–	–	–	–	86	47	0	7	-	-
	MINNEAPOLIS	41	24	48	1	32	0	0.00	-0.46	0.00	0.90	69	2.72	87	86	60	0	6	0	0
	ROCHESTER	38	20	43	-7	29	-2	0.24	-0.19	0.19	1.45	126	3.68	145	–	–	0	6	2	0
MS	GREENWOOD	70	48	77	35	59	3	–	–	–	–	–	–	–	–	–	0	0	-	-
	JACKSON	71	47	79	38	59	2	0.69	-0.69	0.38	2.05	49	13.24	91	91	49	0	0	2	0
	MERIDIAN	72	45	80	37	58	1	0.86	-0.89	0.45	3.00	62	13.58	88	95	47	0	0	2	0
MO	CAPE GIRARDEAU	61	38	77	23	50	1	0.78	-0.40	0.78	3.36	95	10.99	113	–	–	0	1	1	1
	COLUMBIA	60	37	82	21	48	5	0.12	-0.61	0.12	0.96	46	8.08	150	82	48	0	2	1	0
	KANSAS CITY	60	35	78	21	47	3	0.04	-0.56	0.03	0.30	18	3.61	93	86	45	0	1	2	0
	SAINT LOUIS	60	37	87	21	49	2	0.50	-0.34	0.44	2.00	81	8.77	137	83	49	0	1	2	0
	SPRINGFIELD	60	36	81	25	48	2	0.44	-0.47	0.43	2.91	111	8.03	128	88	46	0	3	2	0
MT	BILLINGS	61	35	76	23	48	12	0.04	-0.24	0.04	0.48	63	1.44	62	65	29	0	3	1	0
	GLASGOW	41	24	52	11	33	2	0.13	0.04	–	0.27	117	0.62	71	88	62	0	4	-	-
	GREAT FALLS	56	32	69	23	44	10	0.01	-0.25	0.01	0.44	59	0.86	39	75	39	0	4	1	0
	HAVRE	52	23	67	10	37	5	0.05	-0.11	0.05	0.10	23	0.30	23	87	48	0	5	1	0
	HELENA	61	30	71	25	45	11	0.02	-0.15	0.02	0.07	15	0.43	28	84	28	0	6	1	0
	KALISPELL	46	28	47	20	37	2	0.19	-0.03	0.11	1.51	216	4.55	137	94	57	0	4	4	0
	MILES CITY	61	33	76	27	47	13	0.09	-0.06	0.09	0.22	56	0.52	36	–	–	0	3	1	0
	MISSOULA	49	31	55	29	40	4	0.17	-0.05	0.15	1.65	239	4.10	150	86	49	0	6	3	0
NE	GRAND ISLAND	64	28	80	21	46	7	0.02	-0.43	0.02	0.04	3	1.10	45	86	35	0	5	1	0
	LINCOLN	62	30	78	21	46	6	0.02	-0.48	0.02	0.07	5	1.00	38	–	–	0	5	1	0
	NORFOLK	61	30	79	26	45	8	0.00	-0.44	0.00	0.53	42	1.52	60	85	42	0	5	0	0
	NORTH PLATTE	66	25	83	18	46	8	0.00	-0.29	0.00	0.03	4	0.70	44	80	23	0	7	0	0
	OMAHA	59	32	73	25	46	6	0.01	-0.48	0.01	0.41	30	1.57	55	82	47	0	3	1	0
	SCOTTSBLUFF	67	30	82	22	48	11	0.00	-0.26	0.00	0.15	21	0.78	47	37	34	0	5	0	0
	VALENTINE	63	25	83	18	44	9	0.00	-0.25	0.00	0.00	0	0.51	38	–	–	0	7	0	0
NV	ELY	64	32	71	26	48	13	0.00	-0.22	0.00	0.00	0	1.89	92	65	17	0	5	0	0
	LAS VEGAS	82	55	88	51	69	12	0.00	-0.09	0.00	0.00	0	0.20	16	25	10	0	0	0	0
	RENO	69	38	75	30	53	10	0.00	-0.16	0.00	0.00	0	4.02	153	80	22	0	2	0	0
	WINNEMUCCA	67	33	79	26	50	10	0.02	-0.17	0.02	0.02	4	1.67	87	68	22	0	3	1	0
NH	CONCORD	37	15	42	2	26	-7	0.38	-0.24	0.19	1.78	93	7.23	104	–	–	0	7	3	0
NJ	ATLANTIC CITY	49	28	68	17	39	-4	0.17	-0.66	0.14	3.78	149	10.08	111	83	50	0	5	2	0
NM	ALBUQUERQUE	73	45	81	42	59	11	0.00	-0.11	0.00	0.00	0	0.67	53	35	9	0	0	0	0
	CLOVIS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	-	-	-	-
	ROSWELL	78	41	91	35	60	7	–	–	–	–	–	–	–	–	–	1	0	-	-
NY	ALBANY	39	21	44	11	30	-6	0.24	-0.44	0.13	1.51	74	3.88	58	86	45	0	7	3	0
	BINGHAMTON	38	19	46	13	28	-5	0.22	-0.43	0.12	2.00	102	4.87	73	80	42	0	7	3	0
	BUFFALO	38	22	51	16	30	-5	0.21	-0.40	0.12	2.93	157	10.15	147	84	48	0	7	4	0
	NEW YORK	46	33	55	26	40	-3	0.08	-0.75	0.07	2.44	98	8.83	105	68	36	0	2	2	0
	ROCHESTER	37	21	46	16	29	-7	0.43	-0.09	0.23	2.57	162	7.09	123	–	–	0	7	3	0
	SYRACUSE	38	19	47	12	29	-7	0.32	-0.33	0.23	2.22	117	5.65	88	82	45	0	7	3	0
NC	ASHEVILLE	61	36	70	25	49	0	1.76	0.48	1.62	4.82	118	14.46	116	–	–	0	2	2	1
	CHARLOTTE	66	43	79	33	54	3	0.44	-0.57	0.44	2.07	64	9.43	87	83	44	0	0	1	0
	GREENSBORO	62	39	73	29	51	1	1.15	0.30	0.89	3.20	119	8.98	98	87	44	0	2	2	1
	HATTERAS	59	43	72	35	51	-2	0.20	-0.77	0.20	4.48	145	11.97	96	88	67	0	0	1	0
	NEW BERN	68	44	83	33	56	2	0.25	-0.82	0.23	2.06	72	9.26	81	–	–	0	0	2	0
	RALEIGH	65	38	78	28	52	0	1.47	0.62	1.29	2.89	104	8.84	89	89	45	0	2	2	1
	WILMINGTON	68	43	83	34	56	2	0.62	-0.38	0.62	1.10	34	7.95	64	–	–	0	0	1	1
ND	BISMARCK	43	20	56	10	32	2	0.22	0.04	0.22	0.73	155	2.14	156	87	56	0	7	1	0
	FARGO	36	16	43	0	25	-2	0.00	-0.26	0.00	0.40	60	1.03	57	85	66	0	7	0	0
	GRAND FORKS	35	13	43	-4	24	-2	0.00	-0.22	0.00	0.35	56	1.24	69	–	–	0	7	0	0
	WILLISTON	39	21	46	5	30	0	0.02	-0.15	0.02	0.74	166	1.17	83	88	64	0	7	1	0
OH	AKRON-CANTON	48	27	65	16	37	-2	0.15	-0.62	0.11	1.41	61	4.41	66	78	44	0	6	2	0
	CINCINNATI	55	32	73	15	43	-1	0.76	-0.23	0.76	4.61	155	9.13	111	86	44	0	2	1	1
	CLEVELAND	45	29	67	20	37	-1	0.13	-0.54	0.12	2.34	116	7.04	113	90	59	0	6	2	0
	COLUMBUS	52	32	70	18	42	0	0.31	-0.45	0.31	3.08	135	6.70	100	81	50	0	2	1	0
	DAYTON	51	31	72	18	41	-1	0.60	-0.20	0.60	3.22	136	7.31	110	81	53	0	3	1	1

Based on 1961-90 normals

Weather Data for the Week Ending March 22, 1997

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP, °F		PRECIP.	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	50	28	72	11	39	1	0.27	-0.35	0.20	1.47	81	8.08	153	82	46	0	5	3	0
	YOUNGSTOWN	46	25	63	15	36	-2	0.31	-0.42	0.31	2.41	112	3.79	80	86	53	0	7	1	0
OK	OKLAHOMA CITY	69	41	90	34	55	4	0.00	-0.63	0.00	0.00	0	2.61	57	79	39	1	0	0	0
	TULSA	67	40	92	26	53	2	0.05	-0.76	0.05	0.39	16	4.06	69	82	41	1	1	1	0
OR	ASTORIA	56	45	61	35	50	5	5.21	3.82	2.75	13.88	267	30.03	132	92	64	0	0	5	2
	BURNS	60	31	69	22	46	9	0.12	-0.11	0.07	0.22	30	3.04	122	–	–	0	4	3	0
	MEDFORD	70	39	77	32	54	7	0.20	-0.21	0.15	0.86	64	5.39	90	88	32	0	1	2	0
	PENDLETON	61	41	71	32	51	6	0.28	0.00	0.16	1.07	124	2.49	71	83	33	0	1	2	0
	PORTLAND	58	43	62	33	51	3	1.61	0.81	0.84	6.46	248	15.25	129	94	51	0	0	5	2
	SALEM	59	43	61	32	51	5	1.61	0.87	0.80	6.66	216	17.81	132	–	–	0	1	5	1
PA	ALLENTOWN	45	27	55	17	36	-4	0.00	-0.74	0.00	2.25	98	6.22	74	74	36	0	8	0	0
	ERIE	42	28	62	19	34	-3	0.28	-0.41	0.21	3.45	167	8.76	133	86	54	0	7	3	0
	HARRISBURG	50	32	63	24	41	-2	0.03	-0.71	0.02	2.45	103	5.92	73	–	–	0	2	2	0
	PHILADELPHIA	50	32	61	25	41	-3	0.02	-0.78	0.02	2.79	116	8.26	98	81	48	0	4	1	0
	PITTSBURGH	50	30	66	18	40	0	0.06	-0.74	0.06	2.18	91	5.24	72	72	42	0	4	1	0
	SCRANTON	43	24	53	16	34	-4	0.13	-0.46	0.09	1.35	77	3.96	66	70	37	0	6	2	0
RI	PROVIDENCE	43	27	49	21	35	-3	0.23	-0.70	0.21	1.94	68	8.06	78	71	36	0	7	2	0
SC	CHARLESTON	72	49	87	36	60	1	0.30	-0.70	0.30	1.34	42	6.22	63	86	45	0	0	1	0
	COLUMBIA	70	45	84	31	58	2	0.04	-1.06	0.04	0.90	23	9.93	82	88	41	0	1	1	0
	FLORENCE	69	43	84	32	56	0	–	–	–	–	–	–	–	–	–	0	1	-	-
	GREENVILLE	67	42	81	29	54	2	0.39	-0.84	0.38	1.85	48	12.70	102	88	44	0	2	2	0
SD	ABERDEEN	37	17	44	2	27	-3	0.29	0.03	0.24	0.71	99	2.93	151	91	67	0	7	3	0
	HURON	41	25	48	17	33	0	0.00	-0.40	0.00	0.14	13	1.48	68	88	68	0	7	0	0
	RAPID CITY	63	27	81	20	45	10	0.03	-0.22	0.03	0.03	5	0.90	58	78	27	0	8	1	0
	SIOUX FALLS	45	26	57	24	35	1	0.01	-0.39	0.01	0.10	9	1.88	85	90	56	0	7	1	0
TN	CHATTANOOGA	66	43	78	30	55	3	1.33	-0.06	0.76	3.85	89	15.23	108	87	40	0	2	3	2
	KNOXVILLE	61	40	71	27	51	1	1.26	0.09	0.98	4.91	134	15.00	126	83	50	0	2	3	1
	MEMPHIS	65	45	78	31	55	1	1.98	0.72	1.49	8.14	215	20.13	170	–	–	0	1	3	1
	NASHVILLE	62	38	76	25	50	-1	1.79	0.66	1.35	8.57	249	15.67	145	88	45	0	1	3	1
TX	ABILENE	72	46	91	40	59	2	0.00	-0.31	0.00	0.72	78	4.30	138	78	38	1	0	0	0
	AMARILLO	76	38	85	28	57	9	0.00	-0.22	0.00	0.00	0	1.10	62	72	18	0	2	0	0
	AUSTIN	74	52	88	49	63	0	0.30	-0.11	0.26	1.03	78	6.00	116	88	47	0	0	2	0
	BEAUMONT	71	53	82	48	62	0	1.48	0.75	1.03	2.69	116	13.30	127	–	–	0	0	3	1
	BROWNSVILLE	76	59	82	52	67	-2	1.41	1.30	0.98	4.58	1347	5.61	190	98	49	0	0	5	1
	CORPUS CHRISTI	74	58	84	49	66	0	1.90	1.71	1.04	4.43	842	5.82	134	97	59	0	0	4	2
	DEL RIO	77	52	88	43	65	0	0.04	-0.11	0.04	2.44	595	4.68	244	86	38	0	0	1	0
	EL PASO	79	48	85	39	63	8	0.00	-0.06	0.00	0.11	50	0.82	79	38	16	0	0	0	0
	FORT WORTH	69	47	86	39	58	2	0.01	-0.66	0.01	1.54	74	9.22	146	88	58	0	0	1	0
	GALVESTON	69	58	72	50	64	1	2.41	1.91	1.02	4.89	313	11.86	169	–	–	0	0	3	3
	HOUSTON	73	52	84	46	62	1	1.52	0.86	0.67	6.69	321	15.35	184	94	59	0	0	3	2
	LUBBOCK	77	40	93	31	59	7	0.00	-0.19	0.00	0.03	5	1.61	96	75	20	1	1	0	0
	MIDLAND	78	45	90	36	61	5	0.00	-0.11	0.00	0.03	9	1.92	138	78	22	1	0	0	0
	SAN ANGELO	73	45	86	36	59	0	0.00	-0.20	0.00	1.59	261	6.47	261	83	43	0	0	0	0
	SAN ANTONIO	75	51	85	42	63	0	0.37	0.04	0.23	1.85	178	4.57	100	90	48	0	0	3	0
	VICTORIA	74	56	84	46	65	1	6.46	6.13	4.04	10.88	1017	16.33	311	95	52	0	0	5	3
	WACO	70	46	85	36	58	-1	0.03	-0.50	0.02	2.96	184	13.28	249	94	50	0	0	2	0
	WICHITA FALLS	72	45	94	36	58	4	0.00	-0.52	0.00	0.11	7	3.32	83	82	41	1	0	0	0
UT	CEDAR CITY	71	35	76	26	53	13	0.00	-0.32	0.00	0.08	8	2.49	98	–	–	0	2	0	0
	SALT LAKE CITY	66	41	74	36	54	11	0.06	-0.39	0.06	0.74	58	4.63	126	72	25	0	0	1	0
VT	BURLINGTON	33	10	39	0	22	-10	0.17	-0.35	0.14	1.79	118	4.66	94	82	39	0	7	2	0
VA	NORFOLK	58	40	77	33	49	0	0.90	0.06	0.86	2.39	90	7.27	73	84	55	0	0	2	1
	RICHMOND	59	36	74	28	47	-2	0.66	-0.17	0.55	2.31	88	7.95	88	86	37	0	2	2	1
	ROANOKE	58	36	73	25	47	-1	0.93	0.13	0.66	2.87	116	8.42	104	82	40	0	2	2	1
WA	QUILLAYUTE	51	39	54	31	45	1	8.29	5.73	3.41	17.45	207	44.19	125	99	78	0	2	7	3
	SEATTLE-TACOMA	54	42	57	35	48	2	3.54	2.75	1.79	7.62	293	16.64	139	96	63	0	0	5	2
	SPOKANE	53	37	60	29	45	6	1.36	1.03	0.39	2.28	211	5.36	118	90	55	0	2	5	0
	YAKIMA	59	37	66	26	48	4	0.25	0.10	–	0.60	122	1.94	80	87	44	0	2	-	-
WV	BECKLEY	51	33	68	18	42	-1	1.31	0.54	0.70	4.76	199	9.29	112	87	47	0	2	2	2
	CHARLESTON	54	35	72	22	44	-3	0.94	0.11	0.73	6.86	287	10.13	119	87	44	0	3	2	1
	HUNTINGTON	56	35	73	23	45	1	0.82	0.02	0.74	7.19	290	10.78	126	84	46	0	2	2	1
	PARKERSBURG	54	32	69	19	43	-1	0.86	-0.02	0.83	5.10	190	8.69	100	–	–	0	3	2	1
WI	GREEN BAY	39	16	52	-12	27	-4	0.00	-0.49	0.00	1.25	91	3.85	108	84	58	0	6	0	0
	LACROSSE	46	24	54	-2	35	1	0.04	-0.44	–	2.46	195	5.42	175	–	–	0	5	-	-
	MADISON	47	25	63	4	36	2	0.01	-0.51	0.01	0.77	55	4.20	116	84	48	0	4	1	0
	MILWAUKEE	46	29	65	11	37	3	0.00	-0.65	0.00	0.48	26	4.43	92	–	–	0	3	0	0
	WAUSAU	41	20	50	-9	31	1	0.00	-0.47	0.00	1.22	95	3.64	118	–	–	0	7	0	0
WY	CASPER	61	35	71	24	48	14	0.01	-0.21	0.01	0.29	47	1.40	80	69	24	0	3	1	0
	CHEYENNE	61	34	72	24	48	14	0.01	-0.24	0.01	0.34	50	1.06	72	65	20	0	4	1	0
	LANDER	62	33	72	28	48	13	0.00	-0.27	0.00	0.38	53	0.98	55	57	20	0	3	0	0
	SHERIDAN	59	33	75	26	46	11	0.02	-0.21	0.02	0.21	34	1.10	54	–	–	0	5	1	0
PR	SAN JUAN	85	71	88	69	78	-1	0.06	-0.47	0.06	1.72	110	10.31	113	89	57	0	0	-	-

Based on 1961-90 normals

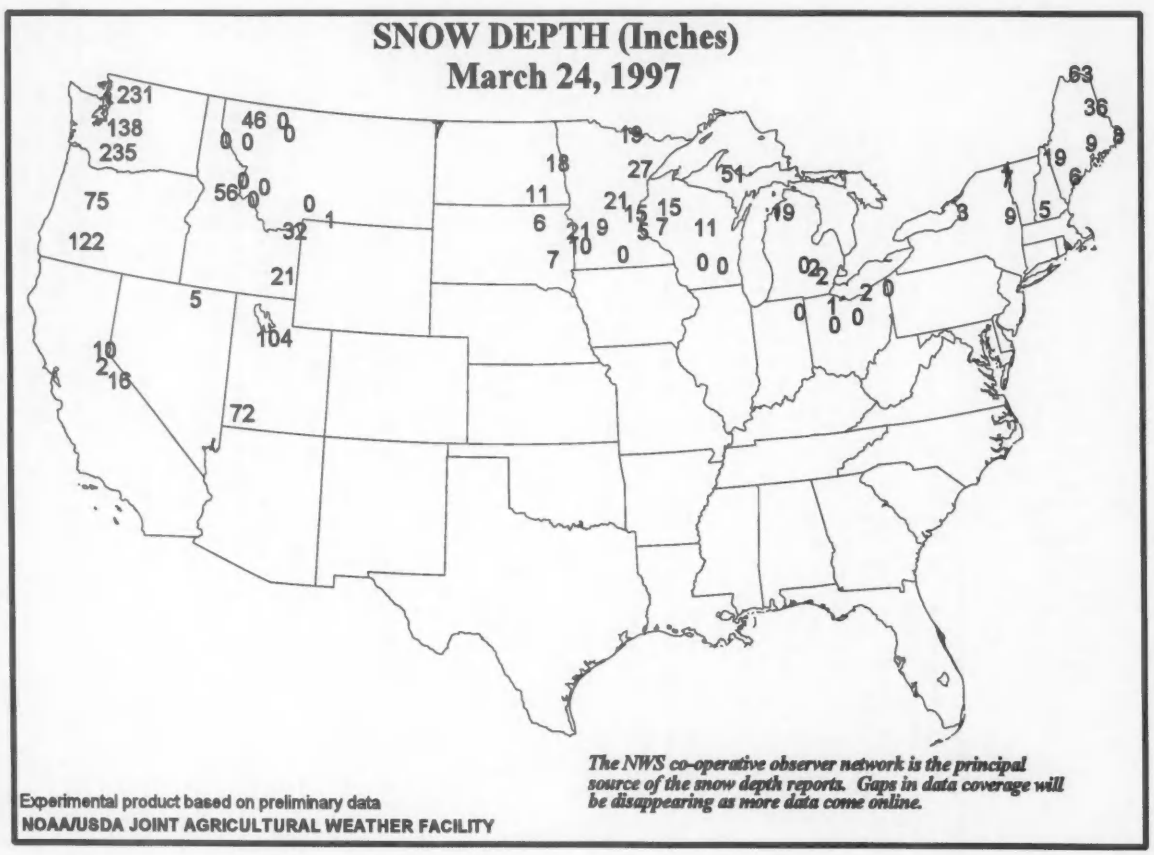
Note: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

National Agricultural Summary

March 17 - 23, 1997

HIGHLIGHTS

Winter wheat condition declined slightly as above-normal temperatures and dry conditions persisted for the third consecutive week over the central and southern Great Plains. Warming in the northern Great Plains caused some snowmelt flooding in areas along rivers. In the Northwest, rains brought flooding and mudslides to parts of western Washington. Rain from eastern Texas to Virginia hindered spring field activity. In the Southeast, drier conditions allowed fieldwork to advance on schedule. Damage to the Southeastern States' fruit crops from the previous week's cold weather appeared to be minor. In California, ideal conditions allowed fieldwork to proceed normally.



International Weather and Crop Summary

March 16 - 22, 1997

HIGHLIGHTS

FSU-WESTERN: Cold weather, accompanied by variable precipitation, halted greening of winter wheat.

EUROPE: Light to moderate showers covered much of Europe, but unfavorable dryness persisted in Spain and southwestern France.

NORTHWESTERN AFRICA: Continuing drought worsened winter grain prospects from Morocco to central Algeria.

AUSTRALIA: Tropical Storm Justin brought heavy rain and possible damage to coastal sugarcane.

SOUTH AFRICA: Scattered showers benefited immature, late-planted corn and increased moisture for winter wheat planting.

SOUTHEAST ASIA: Scattered showers slowed main-season rice harvesting in eastern Java.

EASTERN ASIA: Cooler weather in the North China Plain and southern China slowed early winter wheat and rice growth.

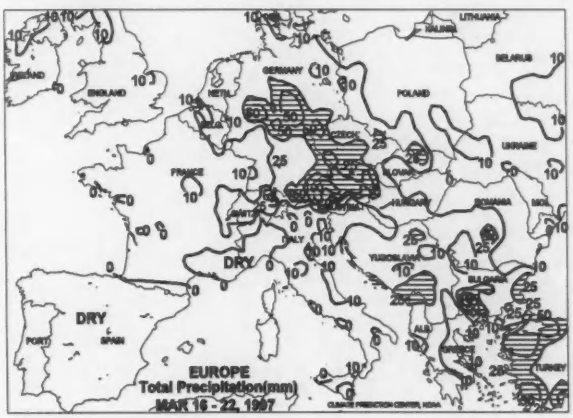
SOUTH AMERICA: Rain stabilized soybean yield prospects in Santa Fe, Argentina.

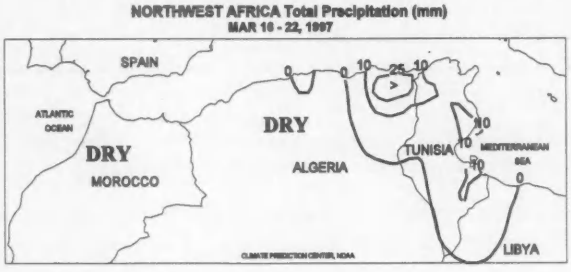
FSU-WESTERN

Colder weather spread over Ukraine, Russia, Belarus, and the Baltics and was accompanied by rain and snow. Precipitation amounts varied around 10 mm, with greatest amounts (20-40 mm) falling in the eastern Ukraine and sections of western Russia. Lowest temperatures ranged from -7 to -12 degrees C in most winter grain areas throughout the region. The cold weather halted further greening in winter grains in Ukraine and kept winter grains dormant in Russia, Belarus, and the Baltics. A light snow cover returned to crop areas in northern and eastern Ukraine, Belarus, and the Baltics. Weekly temperatures averaged 1 to 3 degrees C below normal in most areas.

EUROPE

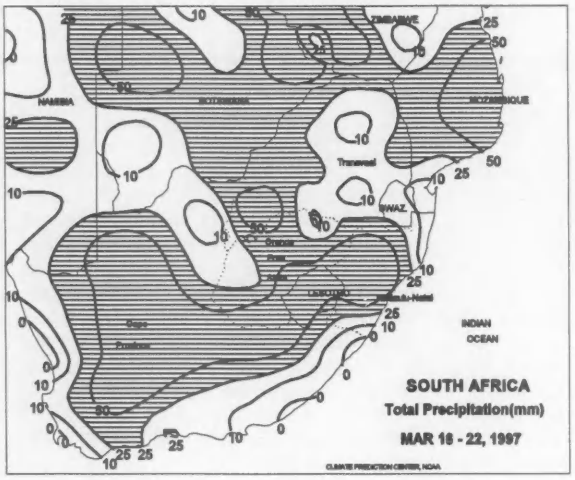
Light showers (5-15 mm) fell in northern France, the United Kingdom, and the Benelux countries, favoring winter grain development and increasing topsoil moisture needed for spring grain emergence. Heavier rain (10-25 mm, exceeding 50 mm at many locations) covered Germany. Rain is needed in southwestern France for developing winter grains and for summer crop planting, which typically begins in April. In Spain, prolonged dryness and unusually warm weather stressed winter grains entering reproduction in the south, as well as newly emerging spring crops. In eastern Europe, colder weather was accompanied by rain and snow, halting early season fieldwork but boosting soil moisture. Greatest amounts of rain (15-50 mm, exceeding 100 mm locally) fell in the Czech Republic, eastern former Yugoslavia, and Bulgaria. Precipitation amounts in Poland, Slovakia, Hungary, and Romania ranged from 2 to 32 mm. Weekly temperatures averaged 2 to 5 degrees C above normal in the western half of Europe and 2 to 5 degrees C below normal in the east.





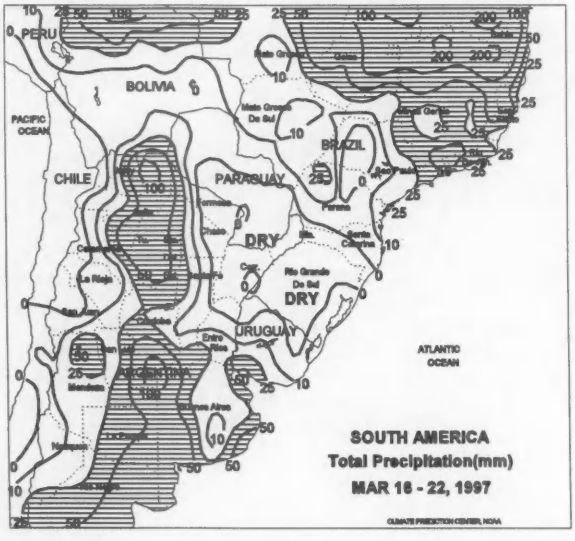
NORTHWESTERN AFRICA

In Morocco, prolonged dryness was accompanied by unusually warm weather, worsening conditions for winter grains in the reproductive phase of development. Farther east, drought continued in western and central Algeria, adversely affecting winter grains. In eastern Algeria and Tunisia, scattered showers early in the week brought temporary relief to drought-stressed crops. Precipitation amounts generally ranged from 2 to 10 mm, with isolated amounts in excess of 10 mm. Weekly temperatures averaged 2 to 5 degrees C above normal in Morocco and western Algeria and near normal in eastern Algeria and Tunisia.



SOUTH AFRICA

Scattered showers and thunderstorms (5-55 mm) returned to the western corn belt, benefiting immature corn. The rain also boosted moisture reserves for the upcoming winter wheat crop, typically planted from May through July. Rainfall was generally lighter (5-28 mm) in eastern corn areas and along coastal sugarcane regions, but local heavy showers (55-105 mm) covered interior crop areas of Kwazulu-Natal. Below-normal temperatures across the corn belt, coupled with the rain, slowed dry down and maturation. In Western Cape Province, moderate showers (10-40 mm) benefited eastern agricultural areas.

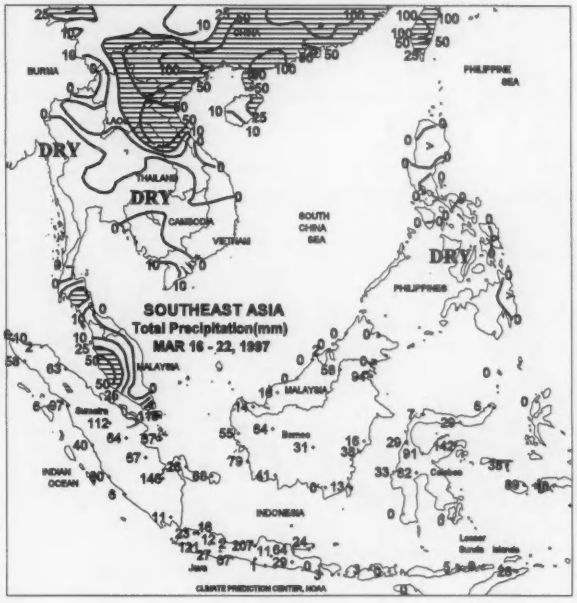


SOUTH AMERICA

In central Argentina, moderate showers (15-40 mm) eased dryness and stabilized soybean yield prospects across southern Santa Fe and Cordoba. However, the persistently below-normal rainfall since January has already reduced soybean yields in Santa Fe. Dry weather favored cotton harvesting in northern Argentina and southern Paraguay. In southern Brazil, mostly dry weather favored maturing soybeans in Rio Grande do Sul and southern Parana. Scattered showers (10-30 mm) caused only minor delays in fieldwork across northern Parana, Mato Grosso do Sul, and Mato Grosso. Heavier showers (50-125 mm) slowed soybean harvesting in Goias and Minas Gerais. Temperatures averaged 1 to 2 degrees C above normal in southern Santa Fe and Cordoba in Argentina and most of southern Brazil.

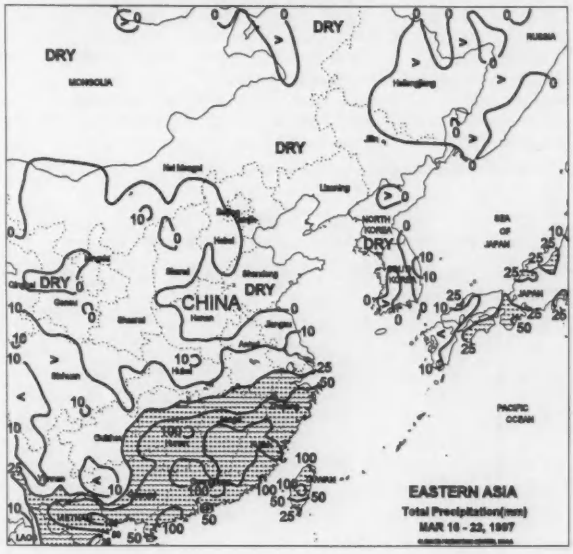
SOUTHEAST ASIA

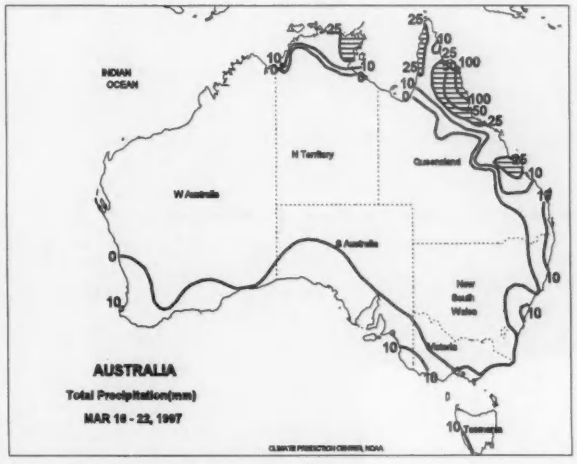
Moderate showers (15-30 mm, with scattered showers greater than 100 mm) fell across western Java, slowing main-season rice harvesting. Light showers (less than 10 mm) fell elsewhere in Java, allowing harvesting to progress. Unseasonably dry weather prevailed across Thailand, the Philippines, and peninsular Malaysia. Temperatures averaged 1 to 2 degrees C above normal in Thailand (maximum temperatures ranged from 37-40 degrees C), increasing water demand on second-season crops. Moderate showers (30-60 mm) boosted irrigation supplies for winter-spring rice in the Red River Delta of northern Vietnam.



EASTERN ASIA

Cool, dry weather (minimum temperatures ranging from 3 to -1 degrees C) slowed early spring growth of winter wheat in the North China Plain. Across southern China, widespread showers (25-80 mm) slowed early double-crop rice planting. The associated cloudiness caused temperatures to average 2 to 4 degrees C below normal across the region, slowing spring growth of rice. The wet, cool weather also slowed maturing winter grains and oilseeds.





AUSTRALIA

Moderate to heavy showers (25-50 mm or more, exceeding 100 mm locally) from Tropical Cyclone Justin fell along Queensland's coast, reportedly causing some damage to sugarcane. The rain spread inland to northern cotton and sorghum areas, hampering harvests and threatening quality. Drier weather elsewhere in the east favored maturing summer crops, but periods of hot weather (highs in the upper 30's C) reduced moisture in the western pasture and grazing lands. In New Zealand, moderate rain (15-35 mm) benefited nearly all major pasture areas.

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Prediction Center
Managing Editor ..... ***Douglas Le Comte*** (202) 720-7919
fax (202) 720-1455
Editor ..... ***Brad Rippey*** (202) 720-1444
Meteorologists .... ***David Secora, Jeff Savadel, Brian Morris***
Special Requests ..... (202) 720-7917
Subscriptions ..... ***John Kopman*** (301) 763-8227, ext. 7534
fax (301) 763-8395

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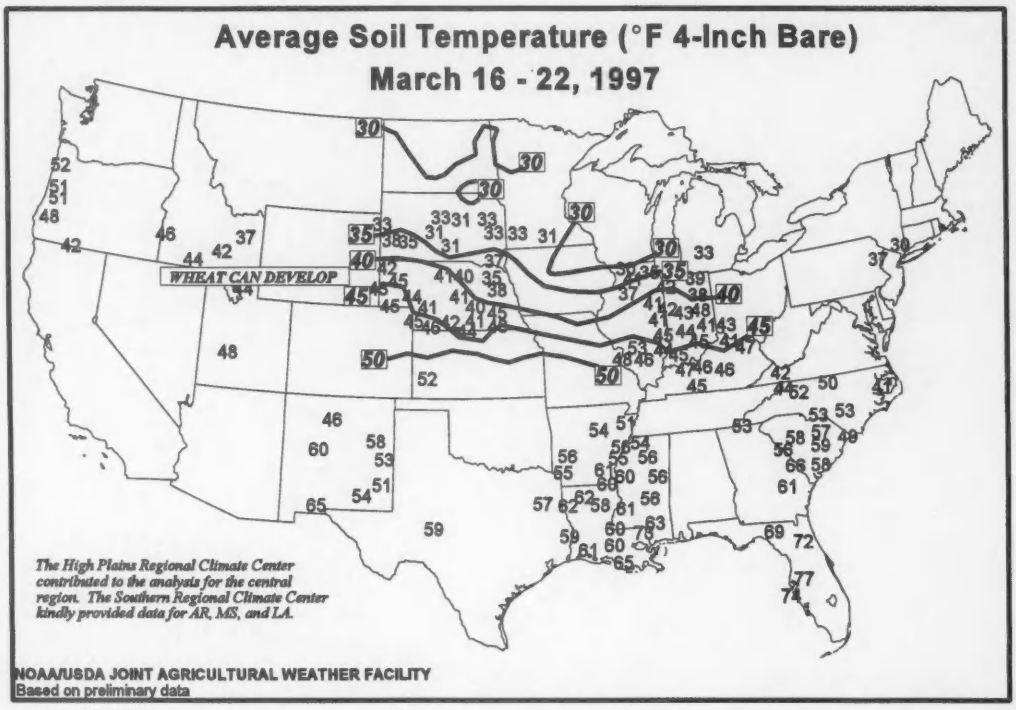
Average Soil Temperature (°F 4-Inch Bare)
March 16 - 22, 1997
WHEAT CAN DEVELOP
The High Plains Regional Climate Center contributed to the analysis for the central region. The Southern Regional Climate Center kindly provided data for AR, MS, and LA.
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Based on preliminary data

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